tumour. The ramifications of the morbid production, which was at least equal in size to a small orange, were now observed extending into and occupying the neighbouring cavities, the orbits, sphenoidal and ethmoidal sinuses—and reaching below as far as the inferior turbinated bone. The delicate laminæ composing the ethmoid, still further attenuated by absorption, were situated in the centre of the tumour and entirely involved by it; the cribriform plate was absorbed in its posterior margin to a considerable extent, as were likewise the orbitar processes of the os frontis; the whole presenting a sharp, jagged, and irregular outline. The frontal sinuses, which were greatly enlarged and prolonged into the orbitar processes, were filled with a dark-coloured viscous secretion; on the left side, the thin shell of bone separating the sinus from the cavity of the orbit, had also been removed, leaving between them a communication several lines in diameter. The consistence of the tumour varied in different parts; above, and where it was connected with the petrous portion of the temporal bone, it was firm, semi-cartilaginous, and of a whitish colour; its section exhibiting a strong resemblance to that of a scirrhous mamma; beneath the cribriform plate it was softer, and in several places presented a medullary or encephaloid appearance; while the inferior division, which has been described as projecting into the nostril, was of intermediate density, and not unlike a polypous excrescence.

"The structure of the morbid growth left no doubt of its malignant character upon the mind either of Dr. Parrish or myself, but the precise spot in which it originated, is shrouded in greater obscurity; perhaps, however, it would be more consonant with all the facts of the case, to refer it to the sphenoidal or posterior ethmoidal cells.

American Medical Almanac.—Dr. J. V. C. Smith, the industrious editor of the Boston Medical and Surgical Journal, has prepared a useful little work, of which the above is the title. It contains a list of the medical schools in the United States, Great Britain, and France, with the names of the professors in each; the titles of the Medical Journals published in this country and in Europe; an alphabetical table of the medicines in use, with their compounds and the doses of each; many prescriptions for particular diseases, and other information of a similar character; is put up in the form of a pocket book, with blank leaves for memoranda. We recommend it to the patronage of the profession.

11. *Liquefaction and Solidification of Carbonic Acid.*—Much interest was excited here some two or three years since, by the annunciation that a French chemist, M. Thillorrier, had succeeded in liquifying and even solidifying, carbonic acid. No description however of the means employed, or of the apparatus used was given. Dr. J. K. Mitchell, with the zeal in the pursuit of science for which he is distinguished, immediately undertook to contrive an apparatus for the purpose, and aided by the suggestions of an intelligent pupil in France, and with the assistance of some friends here, has had one constructed, with which he has obtained solid carbonic acid in considerable quantities and has been enabled successfully to repeat most of the experiments of the French chemist and to revise some and correct other of his results.

"The apparatus consists of a generator of cast iron, A, supported by a wooden stand, B, a receiver, F, also of cast iron, connected to the generator by a brass tube, and fastened firmly to it by the stirrup screw K.—H, I, J, are stop cocks, G the nozle of a pipe, L a glass level-gauge, and S, M, R, a pressure-gauge.

"The generator is 20 inches long and 6 inches in diameter exteriorly. Its cavity is 16 inches deep, and 3 inches, nearly, in diameter, so that it will hold about 4 pints. The walls are, of course, about 1½ inches in thickness. At the top an aperture of two inches in diameter is closed by a strong wrought-iron screw, the shoulder of which is let in about a quarter of an inch. The collar is of block tin turned to the size of the shoulder of the screw. There is a hole in the head of the screw E for the reception of a long, strong iron bar.

"The copper cup, N, 1¾ inches wide, and 9 inches long, holds about 12 fluid ounces. There is a little handle at the top, and a copper wire at the bottom, which make the whole length a little less than that of the cavity of the generator. This cup is used to introduce the sulphuric acid.

"The brass tube between the generator and receiver is divided into two parts of equal length, which admit of being united by means of a conical juncture, kept tight by the stirrup and screw, K, K. Each of these portions of the tube may be closed or opened at pleasure by a stop-cock. One is placed at I, another at J; so that when the receiver is being separated from the generator, the contents of both may be retained. The stop-cocks in common use are inadequate to resist the pressure, and therefore a screw stop-cock is indispensable. It is made to close a small aperture by means of a conical point, and having a double cone, it closes an outlet also when the cock is completely open, so as to prevent the escape of gas by the sides of the screw.

"The receiver, F. is of the capacity of about a pint. The pipe, G, G, turned at a right angle at G, descends so as almost to touch the bottom of the cavity in F. The stop-cock H, G, is similar to I and J. L. is a glass tube connected at each end to a socket of brass, which communicates with the interior of F. It is the gauge for observing the level of the liquid in T.

"The gauge for measuring the pressure is peculiar. Into a wrought iron box, S, are inserted, by screws, two sockets, T and U. The former descends almost to the bottom of the box, which is nearly filled with mercury. Through the axis of the screw X, a small tube passes into the cavity of S, and is continued to the top of it, so as to rise above the mercury. Two strong barometer tubes, S and M, are cemented* into U and W, and hermetically sealed at the upper ends. These tubes are carefully graduated. In one of them, U, a short cylinder of mercury is made to stand at Y at the commencement of the experiment. The other, socket and all, is full of air, as no mercury is introduced into it. A very fine screw at W, enables the operator to regulate the quantity of air in T.

"The tin cup, O, used to collect the solid acid, is covered by a lid, Z, perforated by a pipe, P, whose top is full of small holes. The handle Q, is hollow, so as to fit the end of the pipe of the receiver at G. To secure the hand of the operator from the cold produced by the experiment, the handle is carefully wrapped up in some kind of cloth.

"The apparatus is prepared for use by removing the screw E, and placing 1¾ lbs. of bicarbonate of soda in the generator, A, to which 24 fluid ounces of water are to be added. After making these into a thin paste by stirring, nine fluid ounces of common sulphuric acid are to be poured into the copper cup, N, and that is to be let down by a crook of wire into the generator. After the screw E, has been firmly applied, and the stop-cock, J, closed, the contents of the generator are to be brought into admixture by moving it round to a horizontal position on the swivel, D, which is supported by the wooden frame, B, B. There is a check bar at C. This motion is to be repeated several times. In about ten minutes the whole of the carbonic acid is liberated, and exists in A, chiefly in a liquid state.

"The next step in the process is to attach by means of the stirrup and screw, K, K, the receiver, F, *previously cooled by ice.* The keys, I and J, may then be opened slowly, and instantly the liquid carbonic acid is perceptible in the gauge, L. At the end of ten minutes the communication with the generator may be cut off—when about eight fluid ounces of liquid acid at 32° Fahr. will be found in the receiver.

"By letting this liquid into the box, O, through the pipe, G, a large part of it is instantly expanded into gas, which escapes through the tube, P. The coldness consequent on the enormous expansion freezes another part of the liquid, which falls to the bottom of O. About one drachm of solid matter is thus formed for each ounce of liquid."

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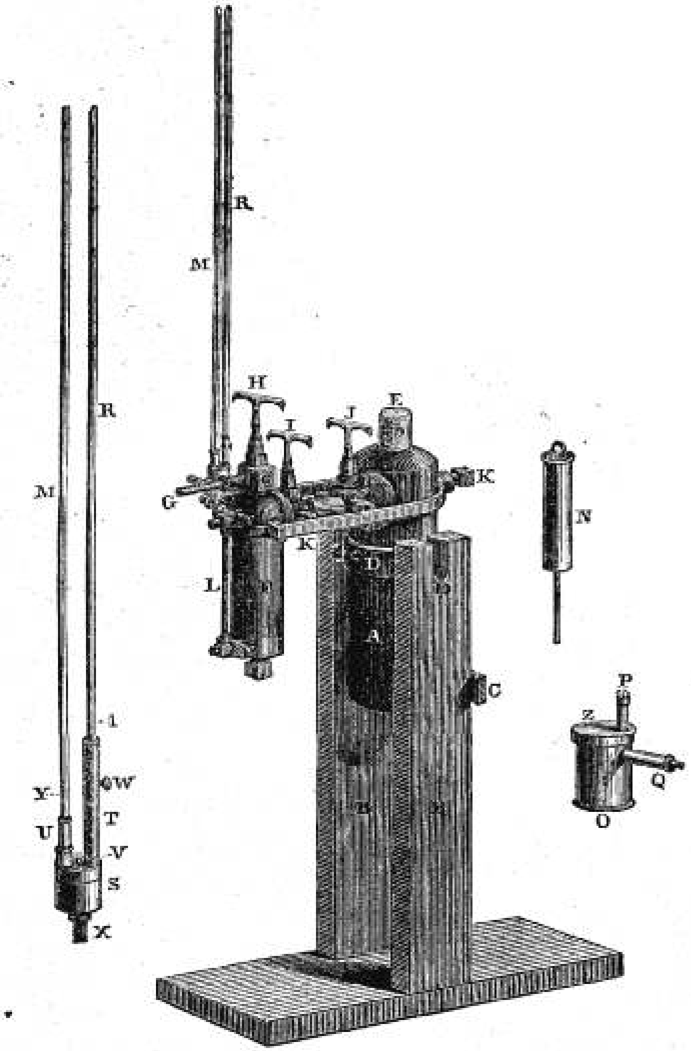
* The cement used was made of shell lac 3 or 4 parts, white or crude turpentine 1 part, melted at as low a temperature as possible so as not to make bubbles in the mixture. This cement is very strong, but liable, without great care in the regulation of the heat, to have capillary tubes in it from the vaporization of the turpentine. This defect may be completely corrected by cutting away, when cold, the external mass of cement, and putting on a little common cap cement which melts at a much lower temperature and closes the tubes.



The solid carbonic acid is of a perfect whiteness, and of a soft and spongy texture, very like slightly moistened snow. It evaporates rapidly, becoming thereby colder and colder, but the coldness produced seems steadily to lessen the evaporation, so that the mass may be kept for some time. The greatest cold produced by the solid carbonic acid in the air was—109°, under an exhausted receiver—136°, the temperature of the atmosphere being, 86°.

The experiments resulting from the great coldness of the new solid are very striking. Mercury poured into a mixture of the solid carbonic acid and ether, is frozen in a few seconds. We have seen Dr. Mitchell freeze in this way, nearly a pound of the metal.

"When a piece of solid carbonic acid is pressed against a living animal surface, it drives off the circulating fluids and produces a ghastly white spot. If held for 15 seconds it raises a blister, and if the application be continued for two minutes a deep white depression with an elevated margin is perceived; the part is killed, and a slough is in time the consequence. I have thus produced both blisters and sloughs, by means nearly as prompt as fire, but much less alarming to my patients."—*Journal of the Franklin Institute*, November, 1838.

Forthcoming Work.—S. D. Gross, M. D., Professor of Pathological Anatomy, in the Cincinnati College, has in press, a work on Pathological Anatomy, which he expects will be published early next summer. It will be comprised in one volume octavo, of seven or eight hundred pages, illustrated by six coloured plates, and upwards of one hundred wood cuts. It is to be strictly elementary in its character, and will comprise, first, a summary of the general principles of pathological anatomy; secondly, a description of the normal appearances of each organ and tissue, accompanied by an account of all their lesions. The object of the author is to prepare a work which shall serve not only as a text book for students attending lectures, but also as a work of reference for the practitioner; presenting him with a clear and comprehensive digest of the existing state of the science. The author has spent four years in the preparation of this work, and from his known industry and ability, we may expect his work will prove a valuable contribution to our medical literature.

An Appeal to the People of Pennsylvania on the subject of an Asylum for the Insane Poor of the Commonwealth.—This is a forcible appeal, and we trust that it will be a successful one. We should regret not having any space for extracts from it, had not the necessity for establishments for the insane poor, distinct from those for pay patients been recently insisted upon in this Journal, (See No. for May, 1837,) and had we not reason to believe that the appeal has been extensively circulated.

University of the City of New York.—The Professors in the Medical department of this Institution, have all resigned their chairs. The main causes of this, as appears from their joint letter of resignation, a copy of which is before us, are the protracted delay of the council in adopting a plan of organization, and the determination of this body to levy a tax upon the Medical Faculty.

The following resolution adopted by the council, embodies their *very reasonable* and *modest* demands.

"Resolved, That the rent to be received for the rooms which the medical faculty require, shall be at the rate of one thousand five hundred dollars, for the first year, commencing on the 1st of May next. Two thousand dollars for the second year, provided the number of students be not more than one hundred and fifty, and if over that number, twelve dollars additional for every scholar up to two hundred; (making the sum of $2600 for 200 students). When the number of students shall be 250 or more, but not 300, the rent to be received shall be three thousand five hundred dollars; and when the number shall be 300 or more, four thousand dollars per annum. All alterations to be made at the expense of the medical faculty, and to be the property of the University. The disposition of the matriculation and graduation fees to be settled by the committee of the medical faculty."*

The Medical faculty have shown merely a just sense of professional dignity, in resisting this flagitious attempt to take from them the rewards of their labours.

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* This committee, it appears, is a part of the council, and it is stated that it was subsequently determined by the council that the graduation fees should be applied to founding a Museum and Anatomical Cabinet to become the property of the University.